

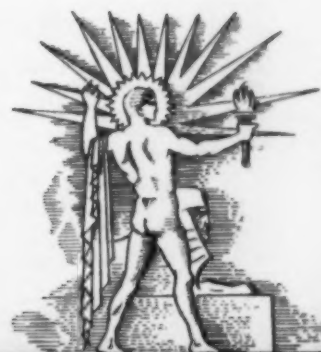
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# SCIENCE NEWS LETTER

THE WEEKLY SUMMARY OF CURRENT SCIENCE •



OCTOBER 26, 1935

Not a Ghost  
See Page 260

SCIENCE SERVICE PUBLICATION

## SCIENCE NEWS LETTER

VOL. XXVIII

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Current Science

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## SCIENCE SERVICE

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## DO YOU KNOW?

Soviet officials are organizing postal routes by which aviators will carry letters and parcels to Arctic points.

Sweden has been having an anti-noise campaign directed against automobile horns, motor boats, and other noise makers.

Yale scientists who have been studying behavior of chimpanzees are now planning tests of the nutrition processes of these apes.

Enameling metal stoves, refrigerators and other metal objects in two coatings, instead of the usual three, is possible with a new process.

Experiments with honey at North Dakota Agricultural College have produced good fruit jelly and now honey is to be tried in making pickles.

Salmon River Canyon in Idaho, the gorge of which is deeper than the famous Grand Canyon of the Colorado, will be explored by an expedition.

Observers state that a trap door spider never leaves its hole; but in catching insects the spider merely springs out, keeping hold of the hole with its hind legs.

A turkey's age can be judged by its breastbone: the bone is flexible in a young bird, brittle in a bird a year or more old, and hard and tough in an old turkey.

Cure of scurvy by lemon juice was noted by physicians as early as 1745.

Mexico is four-fifths Indian today by blood and perhaps also by psychology, says an ethnologist.

A British geographer suggests that winds of the Antarctic may some day be used as vast sources of power.

Field studies of harvesting potatoes on 254 farms, showed that diggers injured 10 per cent. of the potatoes.

Electrical devices for modern poultry farms include electric egg candlers, sprayers, water systems, burglar alarms, and brooders.

In recent years the Florida Experiment Station has tested the relative value of 59 different varieties of cotton for planting in the state.

Kentucky Indians 200 years ago established game refuges called "beloved bear ground," where only a limited number of animals could be killed.

Holland has had such mild winters—with one exception—in the past 12 years that Dutch children have had no good chance to learn ice skating.

Only one home in ten is adequately lighted, says a home management specialist, pointing out that screens, dirty glass, and curtains often shut out much needed daylight.

## WITH THE SCIENCES THIS WEEK

Most articles are based on communications to Science Service or papers before meetings, but where published sources are used they are referred to in the article.

## ASTRONOMY

How large must a heavenly body be in order to keep the surface incandescent? p. 265.

## CHEMISTRY

What is a sun furnace and how high are the temperatures it can create? p. 260.

## GENETICS

What is a good definition of genetics? p. 264.

## HYGIENE

What proportion of people are in good health? p. 263.

## MEDICINE

What new important step has been taken toward the understanding of influenza? p. 260.

## PHYSICS

Can an electric light bulb be lighted without wire connections? p. 260.

How does the noise of a ship's siren compare with that of a normal conversation? p. 265.

What physical problem has been explained satisfactorily? p. 265.

## PSYCHIATRY

Do neurotics have difficulties not met by normal persons? p. 264.

In the anti-war document, who are called responsible for the "boundless misery" of war? p. 259.

## PSYCHOLOGY

Can thought exist apart from the body? p. 264.

## ZOOLOGY

How late in the evolution of animal life did the Gorilla appear? p. 264.

PSYCHIATRY

# Psychiatrists of 30 Nations Issue Warning Against War

## Dutch Physicians Take Lead in Campaign Against Surrender of Civilization to War Psychosis

PSYCHIATRISTS of the world have begun a campaign against the surrender of our civilization to the insanity of war.

That the people of the world may be headed for a "war psychosis" is the solemn warning contained in a document signed by 339 psychiatrists from 30 nations.

The Netherlands Medical Association sponsors the document and has formed a Committee on War Prophylaxis.

Copies of the scientific warning against war have been sent to leading statesmen, particularly in Europe.

The document warns statesmen that twentieth century man still possesses strong, fierce and destructive instincts which break loose as soon as the community to which he belongs feels itself threatened by danger.

The complete text of the statement by 339 psychiatrists of 30 countries to the statesmen of the world, warning against the threat of war, is as follows:

### Complete Text of Psychiatrists' Statement

WE PSYCHIATRISTS, whose duty it is to investigate the normal and diseased mind, and to serve mankind with our knowledge, feel impelled to address a serious word to you in our quality of physicians.

It seems to us that there is in the world a mentality which entails grave dangers to mankind, leading, as it may, to an evident war-psychosis.

War means that all destructive forces are set loose by mankind against itself.

War means the annihilation of mankind by technical science.

As in all things human, psychological factors play a very important part in the complicated problem of war.

If war is to be prevented the nations and their leaders must understand their own attitude towards war.

By self-knowledge a world calamity may be prevented.

Therefore we draw your attention to the following:

1. There is a seeming contradiction between the conscious individual aversion to war and the collective preparedness to wage war. This is explained by the fact that the behaviour, the feelings, the thoughts of an independent individual are quite different from those of a man who forms part of a collective whole. Civilized twentieth century man still possesses strong, fierce and destructive instincts, which have not been sublimated, or only partly so, and which break loose as soon as the community to which he belongs feels itself threatened by danger.

The unconscious desire to give rein to the primitive instinct not only without punishment but even with reward, furthers in a great measure the preparedness for war.

It should be realised that the fighting-instinct, if well directed, gives energy for much that is good and beautiful. But the same instinct may create chaos if it breaks loose from all restraint, making use of the greatest discoveries of the human intellect.

2. It is appalling to see how little the peoples are alive to reality.

The popular ideas of war as they find expression in full dress uniforms, military display, etc., are no longer in keeping with the realities of war itself.

### Apathy Surprising

The apathy, with regard to the actions and intrigues of the international traffic in arms is surprising to anyone who realises the dangers into which this traffic threatens to lead them. It should be realised that it is foolish to suffer certain groups of persons to derive personal profit from the death of millions of men.

We come to you with the urgent advice to arouse the nations to the realisation of fact and the sense of collective self-preservation, these powerful instincts being the strongest allies for the elimination of war.

The heightening of the moral and religious sense in your people tends to the same end.

3. From the utterances of well-known



### FROM A GREAT HEIGHT

*Viewed from ordinary eye-height, a carpet of moss has an astonishing likeness to a forest of pines or spruces seen from an airplane. But the comparatively huge fern leaf betrays the forest as one in the land of Lilliput. Photo by C. H. Eifert.*

statesmen it has repeatedly been evident that many of them have conceptions of war that are identical with those of the average man. Arguments such as "War is the Supreme Court of Appeal" and "War is the necessary outcome of Darwin's theory" are erroneous and dangerous, in view of the realities of modern warfare. They camouflage a primitive craving for power and are meant to stimulate the preparedness for war among the speaker's countrymen.

The suggestive force of speeches made by leading statesmen is enormous and may be dangerous. The warlike spirit, so easily aroused by the cry that the country is in danger, is not to be bridled, as was evident in 1914.

Peoples, as well as individuals, under the influence of suggestions like these, may become neurotic. They may be carried away by hallucinations and delusions, thus involving themselves in adventures perilous to their own and other nations' safety.

### Sufficiently Advanced

We psychiatrists declare that our science is sufficiently advanced for us to distinguish between real, pretended, and unconscious motives, even in statesmen. The desire to disguise national militarism by continual talk about peace will not protect political leaders from the judgment of history. The secret pro-



motors of militarism are responsible for the boundless misery which a new war is sure to bring.

International organization is now sufficiently advanced to enable statesmen to prevent war by concerted action.

Protestation of peace and the desire for peace, however sincere, do not guarantee the self-denying spirit necessary for the maintenance of peace, even at the cost of national sacrifice. If any statesmen should think that the apparatus to ensure peace is, as yet, insufficiently organized, we advise them to devote to

this purpose as much energy and as much money as is now being expended on the armaments of the various countries.

We cannot close without expressing our admiration of those statesmen who show by their actions that their culture and morality are so far advanced that they can lead peoples to a strong organization of peace. In our opinion they alone are truly qualified to act as the leaders of nations.

*Science News Letter, October 26, 1935*

#### MEDICINE

## Human Influenza Virus Grown Artificially in Glass

**T**HE virus that causes human influenza has been cultivated upon non-living food in a glass flask.

This important step in understanding a disease that has caused widespread epidemics in recent years is announced by Drs. Thomas Francis, Jr., and Thomas P. Magill of the Rockefeller Institute for Medical Research in a communication to the journal *Science* (Oct. 11).

Only last May Drs. Francis and Magill told the medical world that influenza virus, a substance beyond the reach of the microscope in size, had been definitely identified and that the same virus causes the disease in different parts of the world.

Now they have satisfied themselves by careful tests upon mice that the dangerous transmitting virus will thrive and multiply upon non-living material in a glass flask, or "in vitro," as the scientists say.

The infection used came originally from a human patient in Puerto Rico, and this virus is known as "P. R. 8." A mouse was infected and died of the disease. Material from his diseased lung was used to give the disease to another mouse and this was repeated until there had been 44 serial passages.

Then attempt to grow the virus in the laboratory, not in the living animal, in vitro instead of in vivo, was made. Lungs of the 44th afflicted mouse were ground, and then diluted with a special liquid, which was whirled at great speed and filtered through a fine porcelain substance to remove the slightest trace of anything that the microscope can detect. A few drops of this liquid were planted upon a special food—"medium" the scientists call it—made from chick embryos. Ordinary tests for

bacterial growth detected nothing.

But when mice were inoculated in the nose with the fluid from the first, the third and in all 20 serial transfers to the artificial medium, they contracted influenza just as surely as other animals who were inoculated with similar quantities of virus that has never had to grow outside the living body. So:

"These facts indicate clearly that the virus has multiplied in vitro."

Important to possible development in the future of anti-influenza procedure for use in human cases, is the fact that the artificially cultured virus is inhibited in causing the disease by the specific anti-influenza immune serum, demonstrated previously to be present in the blood of animals recovered from cases of influenza.

*Science News Letter, October 26, 1935*

#### PHYSICS

## Electric Lamp Lighted Without the Use of Wires

See Front Cover

**C**LEVER lighting and modern radio technique combine to provide the cover on this week's *SCIENCE NEWS LETTER*.

The General Electric scientist holds an ordinary electric bulb in his hands and makes it shine mysteriously without any wires to provide the ordinary electric circuit. Secret of the trick is a high-frequency radio transmitter hidden below the large ring at bottom of picture. The radio energy given off is picked up by the antenna system composed of the scientist's arms and body which form a loop.

*Science News Letter, October 26, 1935*

#### CHEMISTRY

## Super-Hard Glass Made In Sun Furnace

**A** NEW type of "glass" of super-hardness and with high resistance to acids was reported before the meeting of the Electrochemical Society by Dr. Willi M. Cohn of the University of California.

The "glass" is fused transparent zirconium dioxide ( $ZrO_2$ ) having a slightly yellowish tinge. It was made by melting compressed sticks of  $ZrO_2$  in a special sun surface which concentrates sunlight with a large mirror and quickly raises the temperature to 3,000 degrees on the Kelvin temperature scale. Three thousand degrees Kelvin corresponds to more than 2,700 degrees Centigrade.

The zirconia glass can be heated to incandescence and dipped into cold water without cracking, is highly resistant to acids and ranks next to carborundum in hardness.

The sun furnace, with which the zirconium dioxide sticks were melted and fused, is a new step in obtaining high temperatures, Dr. Cohn reported. While it is difficult to determine exactly what temperatures such sun furnaces will create, the theoretical limit is the temperature of the sun's surface at 6,000 degrees Kelvin, or 10,000 degrees Fahrenheit.

The sun furnace, which Dr. Cohn obtained from the Zeiss Works in Jena, Germany, consists essentially of a large plane mirror which follows the course of the sun and reflects the sunlight onto a 100-inch diameter searchlight mirror with a silver backing.

The heating takes place at the focus of the searchlight mirror. Arrangement is made for observation of the samples while being heated. If necessary the sample can be placed in a transparent container and its reactions studied in a reducing or neutral atmosphere or in a vacuum.

"Although this sun furnace means a step in advance as far as obtaining higher temperatures for exact work is concerned, it does not, however, enable us as yet to extend the upper limits of high-temperature research by more than one or two magnitudes over the older limits. Higher temperatures, in an oxidizing atmosphere, than those possible in the sun furnace may have been attained in the past, but, if so, it was for a mere fraction of a second and not for any length of time suitable for the fusion of relatively large masses of material," declared Dr. Cohn's report.

*Science News Letter, October 26, 1935*

# NEW BOOKS ON SCIENCE

Science News Letter presents a comprehensive list of scientific books published or to be published between July 1 and December 31, 1935. All information is believed to be correct but is not guaranteed. Prices are listed where known. Prices marked\* are tentative. This list is recommended as a handy reference in the purchasing of books on science.

Science News Letter will secure for its subscribers any book or magazine in print which was published in the United States. Send check or money order to cover regular retail price (\$5 if price is unknown, change to be remitted) and we will pay postage in the U. S. Address Book Dept., Science News Letter, 2101 Constitution Ave., Washington, D. C.

## Anthropology, Archaeology

- ANCIENT AND MEDIEVAL BASKETWORK—H. H. Bobart—*Oxford*, \$5.\*
- ANTHROPOLOGY IN ACTION—G. Gordon Brown and A. McD. Bruce Hutt—*Oxford*, \$2.75.
- ARCHAEOLOGY OF PALESTINE AND THE BIBLE—W. F. Albright—*Revell*, \$2.
- BOTH SIDES OF BUKA PASSAGE—B. Blackwood—*Oxford*, \$12.\*
- CHINOOK: A History and Dictionary—E. H. Thomas—*Metropolitan*, \$2.
- THE CHRONICLE OF THE SLAVS, BY HELMOLD, PRIEST OF BOSAU—trans. by F. J. Tschan—*Columbia*, \$4.
- COINS FROM SELEUCIA ON THE TIGRIS—R. H. McDowell—*U. of Michigan*, \$3.50.
- THE CROW INDIANS—Robert H. Lowie—*Farrar and Rinehart*, \$4.
- DEVELOPMENT OF SUMERIAN ART—C. Leonard Woolley—*Scribner*, \$10.\*
- THE EMPIRE OF THE SNAKES—F. G. Carnochan and H. C. Adamson—*Stokes*, \$3.
- EVIDENCE OF EARLY MAN IN NORTH AMERICA—E. B. Howard—*U. of Pennsylvania Museum*, \$1.50.
- EXCAVATION AND THE BIBLE—R. H. Malden—*Oxford*, \$1.25.
- EXCAVATIONS AT NUZI; Vol. III, Old Akkadian, Sumerian and Cappadocian Texts from Nuzi—T. J. Meek—*Harvard*, \$6.
- FOLK-LORE FROM ADAMS COUNTY, ILLINOIS—Harry Middleton Hyatt—*Alma Egan Hyatt Found.*, \$6.
- FRAGMENTS OF AN UNKNOWN GOSPEL AND OTHER EARLY CHRISTIAN PAPYRI—ed. by H. Idris Bell and T. C. Skeat—*Oxford*, \$2.
- GUIDE TO THE RUINS OF QUIRIGUA, GUATEMALA—Sylvanus Morley—*Carnegie Institution of Washington*.
- HEREDITY AND THE ASCENT OF MAN—C. C. Hurst—*Macmillan*, \$1.75.\*
- A HISTORY OF ROME, from 753 B. C. to 410 A. D.—C. E. Robinson—*Crowell*, \$3.50.
- HOPÍ JOURNAL—Elsie Clews Parsons—*Columbia*.
- THE INDIAN PEASANT—N. Gangulee—*Oxford*, \$4.
- INDIANS OF THE PUEBLOS—Therese O. Denning—*Whitman*, \$1.50.
- THE MEDICINE MAN OF THE AMERICAN INDIAN AND HIS CULTURAL BACKGROUND—W. T. Corlett—C. C. Thomas, \$5.
- MONUMENTS AND MEN OF ANCIENT ROME—Grant Showerman—*Appleton*, \$5.
- NASKAPI, the Savage Hunters of the Labrador Peninsula—Frank G. Speck—*U. of Oklahoma*, \$3.50.
- NEW ARCHAEOLOGICAL SITES FROM THE STATE OF FALCÓN, VENEZUELA—Gladys A. Nomland—*U. of California*, \$1.50.
- OLD TESTAMENT IN THE LIGHT OF ANTHROPOLOGY—E. O. James—*Macmillan*, \$1.75.

- OUR INDIANS—A. Hyatt Verrill—*Putnam's*, \$2.50.
- OUR PREHISTORIC ANCESTORS—Herdman Cleland—*Garden City Pub. Co.*, \$1.22.
- PALACE OF MINOS AT KNOSSOS—Arthur Evans—*Macmillan*, 4 vols., \$145.00.
- PREHISTORIC ASSYRIA—M. E. L. Mallowan and J. C. Rose—*Oxford*, \$7.
- PRIMITIVES AND THE SUPERNATURAL—Lucien Lévy-Bruhl—*Dutton*, \$5.\*
- RACE DIFFERENCES—Otto Klineberg—*Harper*, \$2.50.
- SOKNOPAIU NESOS: The University of Michigan Excavations at Dime, 1931-1932—ed. by A. E. R. Boak—*U. of Michigan*, \$2.50.
- STAMPED AND INSCRIBED OBJECTS FROM SELEUCIA ON THE TIGRIS—R. H. McDowell—*U. of Michigan*, \$3.50.
- THE STONE AGE RACES OF KENYA—L. S. B. Leakey and others—*Oxford*, \$12.75.
- TEPE GAWRA, Levels I-VIII—E. A. Speiser—*U. of Pennsylvania*, \$6.
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## Astronomy

- ASTRONOMY—Arthur M. Harding—*Garden City*, \$1.98.
- ASTRONOMY (3d ed.)—John C. Duncan—*Harper*, \$3.50.
- THE BINARY STARS—R. G. Aitken—*McGraw-Hill*, \$3.75.
- CONSIDER THE HEAVENS—F. R. Moulton—*Doubleday, Doran*, \$3.
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- AN EPHEMERIS OF 467 A.D.—Heber D. Curtis and Frank E. Robbins—*U. of Michigan*, for exchange, not for sale.
- HANDBOOK OF THE HEAVENS—ed. by H. J. Bernhard and others—*Whittlesey*, \$1.
- HEAVEN KNOWS WHAT—Scorpio—*Doubleday, Doran*, \$2.
- HIGHLIGHTS OF ASTRONOMY, with Stellar scope (device for finding and identifying stars and constellations)—Walter Bartky—*U. of Chicago*, \$2.50; Stellar scope alone \$2.
- THE HOME-MADE TELESCOPE—W. F. Decker—*Perine Book Co.*
- HOW TO MAKE SKY PICTURES (Astronomy for the young)—John Martin and C. L. Youmans—*Greenberg*, \$1.
- A KEY TO THE STARS—R. van der Riet Woolley—*David McKay*, \$2.
- LET'S LOOK AT THE STARS—E. B. Frost—*Houghton Mifflin*, \$1.75.
- ON THE APSIDAL MOTION IN BINARY STARS—W. J. Luyten—*U. of Minnesota*, \$3.
- THE SOLAR SYSTEM AND ITS ORIGIN—Henry Norris Russell—*Macmillan*, \$2.\*
- STARS AND TELESCOPES—James Stokley—*Harper*, \$3.
- THROUGH THE TELESCOPE—Edward A. Fath—*Whittlesey*, \$2.50.
- A WORKING OUTLINE OF ENGINEERING ASTRONOMY—J. H. Service—*Edwards Bros.*, \$2, paper \$1.35.

## Biology

- THE ALGAE AND THEIR LIFE RELATIONS: Fundamentals of Phycology—J. E. Tilden—*U. of Minnesota*, \$5.
- BIOLOGY OF MAYFLIES—J. G. Needham and others—*Comstock*, \$7.50.
- BIRDS AND THE SEA—Frances Pitt—*Longmans*.
- THE BOOK OF THE MICROSCOPE—Gerald Beavis—*Lippincott*.
- A BOOK OF TROUT FLIES—Preston J. Jennings—*Derrydale*, \$20.00.
- CONTRIBUTIONS TO EMBRYOLOGY, Vol. XXV. Nos. 144 to 151. *Carnegie Institution of Washington*, \$2.75.
- CRITERIA FOR THE LIFE HISTORY—John Dollard—*Yale*, \$2.50.
- ESSENTIALS OF TISSUE CULTURE TECHNIQUE—Gladys Cameron—*Farrar & Rinehart*.
- GENETIC VARIATIONS IN RELATION TO EVOLUTION—H. S. Jennings—*Princeton*, \$2.
- GENETICS—H. S. Jennings—*Norton*, \$4.
- GENETICS AND THE SOCIAL ORDER—Mark Graubard—*Tomorrow, Publishers*, cloth 75c, paper 50c.
- HUMAN ECOLOGY—J. W. Bews—*Oxford*, \$5.\*
- INTRODUCTION TO VERTEBRATE EMBRYOLOGY (3d ed.)—Waldo Shumway—*Wiley*, \$4.
- LABORATORY MANUAL IN ANIMAL PARASITOLOGY—H. W. Manter—*Burgess*, \$1.75.
- MICROSCOPIC ANATOMY OF VERTEBRATES—Scott and Kendall—*Lea & Febiger*.
- MODERN EXERCISES IN ADVANCED BIOLOGY—Blechman and Schachter—*Globe*, 40c.
- ORDER AND LIFE—Sir Joseph Needham—*Yale*, \$2.50.
- OUR WORLD OF LIVING THINGS: A High School Biology—Heiss, Obourn and Manzer—*Webster Publ. Co.*, Books I and II, 42c each.
- OUTLINE OF GENERAL BIOLOGY—G. Alexander—*Barnes & Noble*, 75c.
- PRINCIPLES OF INSECT MORPHOLOGY—Robert Evans Snodgrass—*McGraw-Hill*.
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 WORLD BENEATH THE MICROSCOPE—W. Watson-Baker—*Studio*, \$2.50.

### Botany, Agriculture

- THE AGRICULTURAL FAIR—W. C. Neely—*Columbia*, \$3.75.  
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### Announcing

## Historical Geology of the Antillean-Caribbean Region

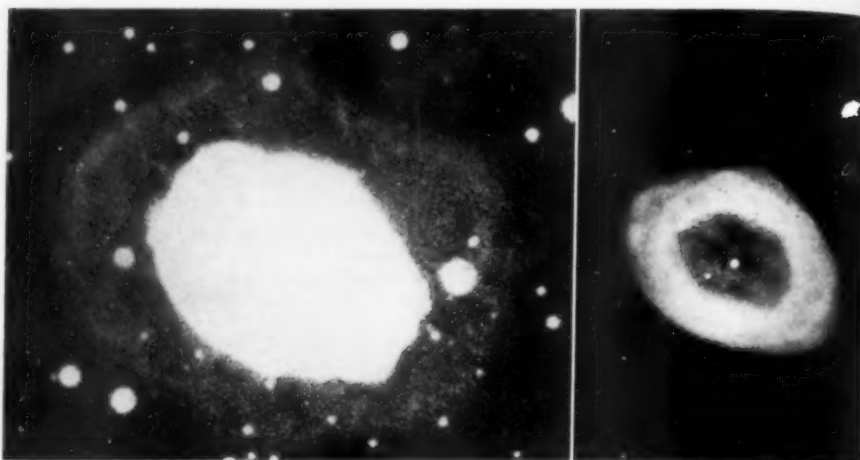
By Charles Schuchert, D.Sc.

Professor Emeritus of Paleontology,  
Yale University

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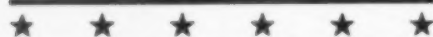
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"I could imagine Arthur manipulating the snake hook and dumping a mad and poisonous snake in a bag, but I couldn't see who was going to hold the bag. I couldn't see myself doing it, anyway."—William Bridges in *SNAKE-HUNTERS' HOLIDAY* by Raymond L. Ditmars and William Bridges (*Appleton-Century*).

*Science News Letter, October 26, 1935*

### PSYCHOLOGY

## Intellectual Light

● "Consciousness has been compared to the light of an electric bulb; the bulb, with its filament and other parts, corresponds to the body. The flowing light is as incapable of existing apart from the lamp as your thoughts are of existing apart from your body."—Dorothy Hazeltine Yates, Ph.D. in *PSYCHOLOGICAL RACKETEERS* (*Bruce Humphries, Inc.*)

*Science News Letter, October 26, 1935*

### BOTANY

## Full of Life

● "Living protoplasm is a going concern, always in a dynamic state. Like a running engine it demands a continuous supply of fuel. Otherwise it will stop running, and death will occur. For fuel the living organism can make use of only a limited class of substances—substances which not only contain energy but contain energy in a form that can be released and put to work by the organism. This is the category of substances that we refer to as food."—Merle C. Coulter in *THE STORY OF THE PLANT KINGDOM* (*Univ. of Chicago Press*).

*Science News Letter, October 26, 1935*

### ZOOLOGY

## Late

● "If we could emulate Noah and review a Parade of the Animal Kingdom containing a pair of every species of animal known to science, and if these animals were to march by at the rate of one pair every three seconds, more than a month would elapse before the Gorilla would make his appearance. No one knows how many different kinds, or species, of animals are now living on the earth, but three million is certainly a conservative estimate."—Robert Heger in *PARADE OF THE ANIMAL KINGDOM* (*Macmillan*).

*Science News Letter, October 26, 1935*

# THE AUD

### MEDICINE

## Without Plan

● "Obviously, science follows no plan. It develops at random. Its progress depends on fortuitous conditions, such as the birth of men of genius, the form of their mind, the direction taken by their curiosity. It is not at all actuated by a desire to improve the state of human beings. The discoveries responsible for industrial civilization were brought forth at the fancy of the scientists' intuitions and of the more or less casual circumstances of their careers."—Alexis Carrel in *MAN THE UNKNOWN* (*Harper & Brothers*).

*Science News Letter, October 26, 1935*

### GENETICS

## Heredity

● "Genetics may be defined as an account of the effects of the diversity of materials with which different individuals start life: the effects of the different materials received from their parents. These effects are commonly classified as heredity, so that Genetics deals largely with heredity. Heredity itself may be defined as the influence on the individuals of the materials which they receive from their parents at the beginning of their lives."—H. S. Jennings in *GENETICS* (*W. W. Norton*)

*Science News Letter, October 26, 1935*

### PSYCHIATRY

## Not Peculiar

● "It must be true, as Jung expressed it so well in the early days when he was still an analyst, that neuroses have no peculiar content which belongs exclusively to them, but that neurotics break down at the same difficulties that are successfully overcome by normal people. This discovery was very far from being a disappointment. It was in complete harmony with another one: that the depth-psychology revealed by psychoanalysis was in fact the psychology of the normal mind. Our path had been like that of chemistry: the great qualitative differences between substances were traced back to quantitative variations in the proportions in which the same elements were combined."—Sigmund Freud in *AUTOBIOGRAPHY* (*W. W. Norton & Company, Inc.*)

*Science News Letter, October 26, 1935*



# AUDRS. SAY:

## PHYSICS

## Colossal Sound

● "The sound power radiated by a siren is colossal compared with that used in normal conversation. For example, the power from a ship's siren might be 1/7 horse-power or approximately 100 watts, which is ten million times the speech power in ordinary conversation. Putting the statement in another form, one-quarter of the population of England would have to talk simultaneously to generate the same sound power as the ship's siren."—N. W. McLachlan in *NOISE; A COMPREHENSIVE SURVEY FROM EVERY POINT OF VIEW* (Oxford).

*Science News Letter, October 26, 1935*

## GEOGRAPHY

## Esteemed

● "In no other land does the tiller of the soil receive the esteem that he does in Japan. Here his rank in the social scale is noteworthy. Indeed, even in overcrowded China with its agricultural millions, the farmers hold no higher place in the social scale."—Daniel R. Bergsma in *ECONOMIC GEOGRAPHY OF ASIA* (Prentice-Hall).

*Science News Letter, October 26, 1935*

## HYGIENE

## Out of Order

● "Many people are not really well all the time. It has been estimated that perhaps 10 per cent. are well, in the sense that their bodies are free from defects that alter function, and that they can carry on their affairs regularly, effectively, and comfortably, without let or hindrance because of aches, pains and ailments. The vast majority, perhaps 80 per cent., are from time to time, or even all the time, slightly or seriously, out of order in respect to health (e. g. subject to repeated colds, indigestion, headaches, etc.; or lacking in the feelings and the appearance of genuine health). The remainder, 10 per cent., may be classed as frankly ill, either out of the running or badly in need of the curative ministrations of medical science.

"It is largely for these 80 per cent. who may be said to have a *subnormal* health that hygiene is of value."—F. L. Meredith in *TWELVE HOURS OF HYGIENE* (Blakiston's).

*Science News Letter, October 26, 1935*

## ASTRONOMY

## Dark

● "For masses less than ten thousand times that of our planet the escape of heat will be too small to keep the surface incandescent. They will be dark bodies. No matter how many of these there may be, revolving about the stars, we cannot detect them."—Henry Norris Russell in *THE SOLAR SYSTEM AND ITS ORIGIN* (Macmillan).

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## PHYSICS

## Closed

● "We have undertaken a survey of the present status of the problem of interpreting the line spectra due to atoms. This interpretation seems to us to be in a fairly closed and highly satisfactory state. All known features of atomic spectra are now at least semi-quantitatively explained in terms of the quantum-mechanical treatment of the nuclear-atom model."—E. U. Condon and G. H. Shortley in *THE THEORY OF ATOMIC SPECTRA* (Cambridge—Macmillan).

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## FORESTRY

## C.C.C.

● "The Civilian Conservation Corps is a combined social relief and conservation program. It was primarily designed to relieve distress and unemployment. It constitutes the greatest forward impetus that forest conservation has received since the early days of the present century, from President Theodore Roosevelt and his chief forester, Gifford Pinchot. It has provided a great opportunity to accomplish many things in the woods that foresters have wanted to do for years."—Nelson C. Brown in *A GENERAL INTRODUCTION TO FORESTRY IN THE UNITED STATES* (John Wiley & Sons).

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## BOTANY

## Rare Normality

● "Of the immense number of actual or potential growing points, as in that part of a tree which is above ground, only a few ever grow under what we call 'normal' conditions. Yet in most plants any bud, except perhaps the flower bud, is capable of producing a shoot, and in many kinds of plants almost any meristematic cell is capable of producing either a shoot or a root."—Otis F. Curtis in *THE TRANSLOCATION OF SOLUTES IN PLANTS* (McGraw-Hill).

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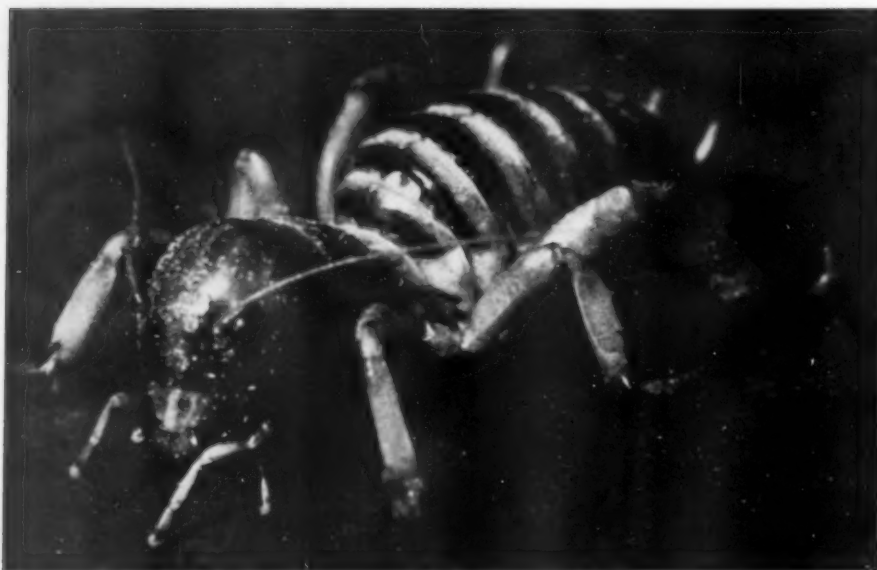
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